

AMENDMENTS TO THE CLAIMS

1-38. (canceled).

39. (currently amended) A connection system for use in a bone fixation device, comprising:

a first bone coupling assembly;

a rod comprising:

a first end ~~portion~~, including a surface received at least partially within and coupled to the first bone coupling assembly;

a second end ~~portion~~, a spacer, and

a longitudinal member located between the first end and the second end, coupled to the first end, and coupled to the second end; and

~~wherein the~~ a spacer is interposed located between the first and second end ~~portions~~, ends and circumferentially disposed about the longitudinal member ~~the longitudinal member is located in a longitudinal axial channel of the spacer, and,~~

wherein the first and second ends ~~portions~~ substantially limit motion of the spacer ~~in a longitudinal direction of about~~ the longitudinal member; and

~~a first bone securing member of a first bone securing assembly, the first bone securing member connected to the rod, wherein the first bone securing assembly secures the rod to a bone of a patient.~~

40. (currently amended) The connection system of claim 39 wherein said spacer further comprises a male interlocking member and a female interlocking cavity each configured to structurally interlock with a corresponding female interlocking cavity and male interlocking member, respectively, of one of an adjacent spacer and an adjacent end portion located on opposite sides of the spacer, ~~or~~ two adjacent spacers located on opposite sides of the spacer, or and two adjacent end portions located on opposite sides of the spacer.

41. (previously presented) The connection system of claim 39, wherein said longitudinal member comprises at least one of a metal wire comprising a plurality of metal yarns and a braided metal wire structure comprising a plurality of interwoven metal wires.

42. (currently amended) The connection system of claim 39, further comprising a second bone ~~securing member of a second bone securing~~ coupling assembly connected to the rod at a different location than the first bone ~~securing member~~ coupling assembly and wherein the first and second bone securing assemblies secure the rod at least partially between the exterior of a first vertebra and a second vertebra such that the connection system limits movement of the first vertebra relative to the second vertebra.

43. (canceled).

44. (previously presented) The connection system of claim 39 wherein said spacer comprises a biocompatible metal spacer.

45. (previously presented): The connection system of claim 39 wherein said spacer comprises a metal-synthetic hybrid spacer.

46. (currently amended) A connection system, comprising:

a rod comprising:

a first element[.,];

a second element[.,];

~~—a third element, and~~ a longitudinal element located between the first element and the second element and coupled to one of the first element and the second element; and

a third element located between the first and second elements and circumferentially disposed about the longitudinal element;

a first ~~securing member of a first bone securing~~ coupling assembly connected to the rod, the first ~~securing member bone coupling assembly~~ securing the rod to a bone structure of a patient;

a second ~~securing member of a second bone securing~~ coupling assembly connected to the rod at a different location than the first bone ~~securing member coupling assembly~~, the second ~~securing bone coupling~~ assembly securing the rod to a bone structure of the patient at a different location from the first ~~securing coupling assembly~~;

~~wherein the third element is located between the first and second elements and includes a longitudinal channel therein; and~~

~~—wherein the longitudinal element passes through the longitudinal channel of the third element and is secured to at least one of the first and second elements, wherein the first and second elements substantially limit motion of the third element in a longitudinal direction [of] about the longitudinal element.~~

47. (previously presented): The connection system of claim 46 wherein the longitudinal element comprises a wire.

48. (previously presented): The connection system of claim 46 wherein the longitudinal element comprises a braided wire.

49. (previously presented): The connection system of claim 46 wherein said third element comprises a biocompatible metal spacer.

50. (previously presented): The connection system of claim 46 wherein said third element comprises a metal-synthetic hybrid spacer.

51. (previously presented): The connection system of claim 46 wherein said third element comprises a synthetic spacer.

52. (currently amended) A connection system, comprising:
a rod ~~having~~ including:
a first element[,];
a second element[,];
~~a third element and~~ a longitudinal element located between the first element and the second element and coupled to one of the first element and the second element; and
a third element located between the first and second elements and circumferentially disposed about the longitudinal element;;
a first ~~securing member of a first bone~~ securing coupling assembly, the first ~~securing bone coupling~~ assembly securing the rod to a bone structure of a patient;
a first ~~securing member of a second bone~~ securing coupling assembly, the second ~~securing bone coupling~~ assembly securing the rod to a bone structure at a different location from the first ~~securing bone coupling~~ assembly;
~~wherein the second element is located between the first and third elements and includes a longitudinal channel therein; and~~
~~wherein the longitudinal element passes through the longitudinal channel of the second element and is secured to at least one of the first and third elements; wherein the first and third~~
second elements substantially limit motion of the second third element in a longitudinal direction of about the longitudinal element and wherein the first and second bone securing assemblies secure the rod at least partially between the exterior of a first vertebra and a second vertebra.

53. (previously presented): The connection system of claim 52 wherein the longitudinal element comprises a wire.

54. (previously presented): The connection system of claim 52 wherein the longitudinal element comprises a braided wire.

55. (currently amended) The connection system of claim 52 wherein said ~~second~~ third element comprises a biocompatible metal spacer.

56. (currently amended) The connection system of claim 52 wherein said ~~system~~ third element comprises a metal-synthetic hybrid spacer.

57. (currently amended) The connection system of claim 52 wherein said ~~second~~ third element comprises a synthetic spacer.

58. (currently amended) The connection system of claim 39 wherein the longitudinal member is ~~formed integrally with~~ and at least one of the first and second end ~~portions~~ are a monolith.

59. (currently amended) The connection system of claim 39 wherein the first and second end ~~portions~~ each have a cross-sectional area that is greater than a cross-sectional area of the longitudinal member.

60. (currently amended) The connection system of claim 39 wherein the first and second end ~~portions~~ each have a circumference that is greater than a circumference of the longitudinal member.

61. (currently amended) The connection system of claim 46 wherein the longitudinal element is ~~formed integrally with~~ and at least one of the first and second elements are a monolith.

62. (currently amended) The connection system of claim 52 wherein the longitudinal element is ~~formed integrally with~~ and at least one of the first and ~~third~~ second elements are a monolith.